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Reilly Tar & Chemical Corp.  
RCRA-PermitsHHC  
file

OCT 21 1986

Corrective Action Requirements. Visual Site Inspection of  
Reilly Tar & Chemical Corporation, Granite City, IllinoisJuana E. Rojo  
Illinois Unit

PCRA Facility Assessment (RFA) File, ILD 006278360

On September 9, 1986, U.S. EPA conducted a visual site inspection of the Reilly Tar & Chemical Corporation ("Reilly Tar") facility in Granite City, Illinois, in an effort to identify what solid waste management units exist at the facility, and their potential for releases of hazardous waste and/or hazardous constituents. The following persons participated in the tour of the facility:

Jim Mayka, Chief, Illinois Technical Unit, U.S. EPA  
Juana Rojo, Chemical Engineer, Illinois Technical Unit, U.S. EPA  
Larry L. Pirtle, Plant Manager, Reilly Tar, Illinois  
W.A. Justin, Director, Environmental Control, Reilly Tar, Indiana  
John C. Craun, Senior Environmental Engineer, Reilly Tar, Indiana

The following is a summary of the information gathered during the site inspection. Please refer to Figures 1 and 2, which show the areas inspected. These include the manufacturing process areas and the waste handling areas.

General Facility Description

The Reilly Tar & Chemical Corporation facility in Illinois is located at 19th and Edwardsville Road in Granite City. The facility is surrounded by industrial and commercial areas. There is also a fairly large residential area to the west of the facility.

Reilly Tar manufactures coal tar pitch, creosote oil and pipeline coating enamel. The enamel is not currently being produced.

Coal tar pitch and creosote oil are manufactured from crude coal tar which is received from steel mill coking operations. The crude coal tar, which comes in rail tank cars, is pumped to storage tanks and then to the stills. Both the distillate (creosote) and the residue (pitch) from the distillation are pumped to storage where they are held pending shipment.

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Coal tar base pipeline enamels were manufactured by distillation of a blend which consisted of crude coal tar, ground coal, and slate. The distillation produced creosote and residue (pipeline enamel).

#### Wastes

The wastes generated at Reilly Tar are creosote contaminated waste (U051) and wastewater treatment sludges (K035) generated in the production of creosote.

There is also a small quantity of chemicals (acetone, toluene, etc.) stored in the quality control laboratory of the facility, pending proper disposal. These chemicals were listed on the Reilly Tar original Part A permit application (see Figure 3) as wastes to be burned in their incinerator, which was under construction in 1980. The incinerator code was later removed from the application, since Reilly Tar decided not to place the incinerator in operation.

#### Hazardous Waste Management Units

We visited the hazardous waste management units at Reilly Tar to identify releases that may have originated at these units. Reilly Tar has a waste pile for U051 waste and a drum storage area for K035 waste, both located inside a waste storage building. There is also an inactive surface impoundment (surrounded by an overflow area), which used to receive wastewater (treated and/ or untreated) from the production of creosote. Both the inactive impoundment and the overflow area will be closed under interim status. The sludges contained in the impoundment are being biologically treated. Land farming at the lagoon bottom has also been proposed.

The areas inspected appeared to be properly managed, and no visible evidence of a release was encountered. However, it is not evident if the floor elevation at the entrance of the pile storage area could adequately prevent flow onto the pile during peak discharge from a 25-year storm (8.78" in August 1946). Reilly Tar claims that they have the resources available to dike the entrance to the storage area in the "unlikely" case that a standing water level would go in excess of the 6" height of the floor above grade level.

### Solid Waste Management Units

In an effort to identify Reilly Tar's waste streams and potential solid waste management units, we toured the manufacturing process area. We inspected the areas where the rail tank cars (which contain crude coal tar) are located, the stills, and the product storage tanks. Some sections of the ground were covered with gravel and looked clean. There were also a few dark stains on the ground, next to some of the product storage tanks. Still, Reilly Tar claims that there are no known releases that resulted in surface soil contamination, and/or cleanup action at the facility.

The Reilly Tar representatives told us about their plans to install collection pans by the storage tanks and other product and raw materials handling areas, to avoid accidental spills from reaching the ground.

There is another product storage area north of the impoundment, where several hundred drums are stored. In this area, there is a building where the pipeline enamel used to be stored. The whole storage area appears clean and no evidence of a release was encountered.

Reilly Tar's response to the Solid Waste Management Unit (SWMU) letter listed two SWMU's: a wastewater treatment plant and a waste pile. The wastewater plant treats mainly the water (water comes entrained in the coal tar) that is released during the manufacture of creosote. The plant consists of three above-ground treatment tanks (one is a spare), which discharge to the local POTW. No visible evidence of a release was encountered in the area where the wastewater treatment plant is located.

The waste pile, which no longer exists, was located in the southeast corner of the facility. A U.S. EPA aerial photograph dated November 28, 1984, indicates that there were three piles of material, rather than one. Reilly Tar explained that the Company had accumulated construction rubble, excavated soil from construction sites and fill dirt, on the ground, and showed us an apparently clean area where the waste materials used to be stored. The waste has been sent to a RCRA landfill. After our visit, Reilly Tar submitted to U.S. EPA an analysis report on the waste removed. It is not known exactly if the waste sample analyzed was really representative of the composition of the waste piles. In addition, the sample was only analyzed for hazardous characteristics (see Figure 4). The sample was neither analyzed for creosote, nor for creosote's hazardous constituents.

The groundwater at the Reilly Tar facility appears to be contaminated. Reilly Tar is currently performing a groundwater assessment program. There are twelve wells around the surface impoundment. Organics and degradation products from the impoundment sludge were found in the groundwater samples. The Company claims that some of the constituents have not been found in the wells recently sampled. Three more wells will be soon installed on the southern side of the facility to comply with an Illinois EPA request. These wells are necessary to better determine the facility's impact on the uppermost aquifer.

Information Gaps

The product storage area to the north of the impoundment has not been well identified by the facility; however, no evidence of a release was observed.

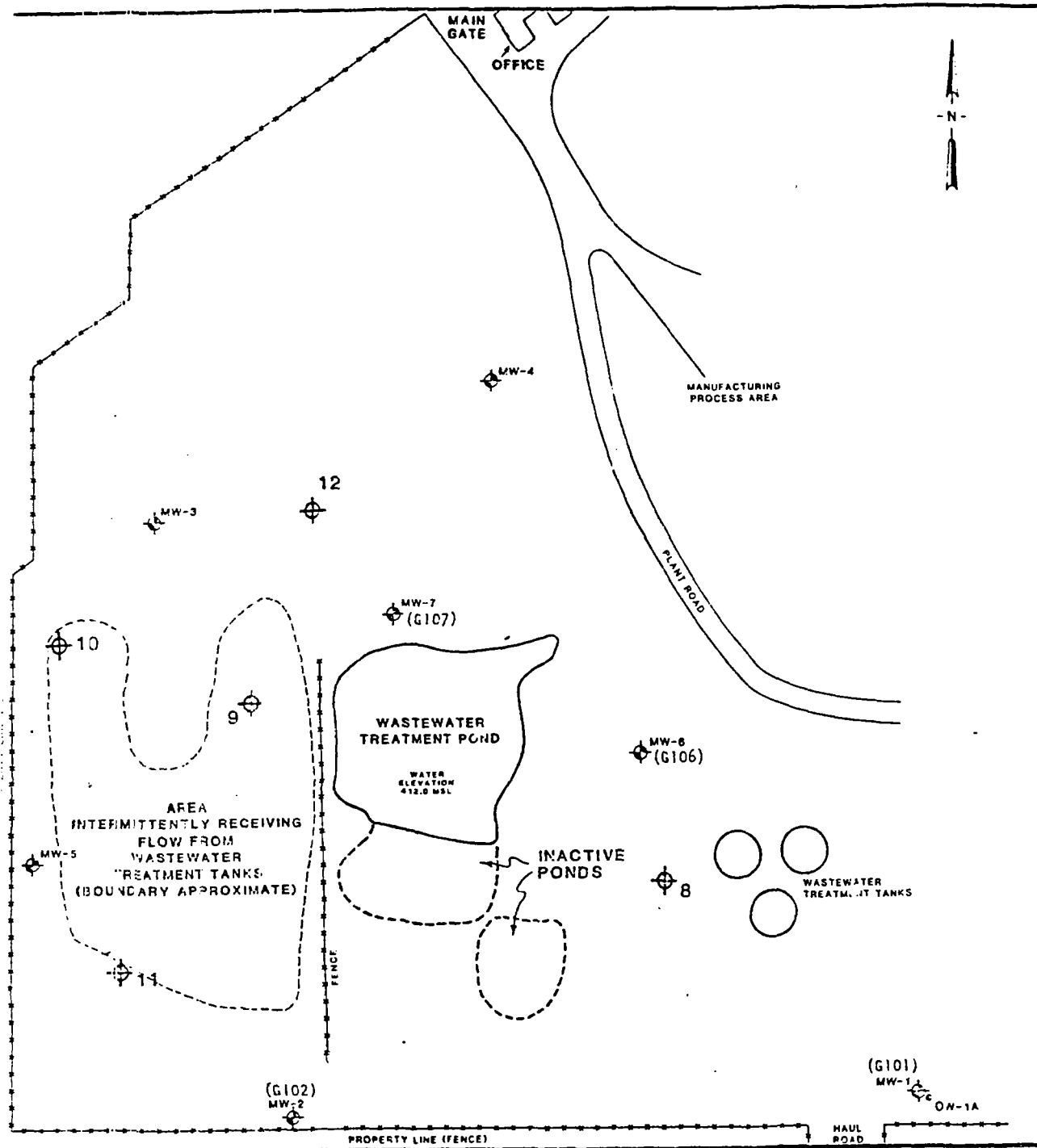
Assuming that the stains observed in the production areas arise from "de minimis" losses of raw materials and products--as Reilly Tar has indicted--they would not require further investigation. However, the area where the waste piles were located, is of concern; sampling of the soil would supply specific information to determine if further investigation of the area is needed.

cc: James N. Mayka, U.S. EPA  
\_\_\_\_ Linda Kissinger, IEPA

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0 100 200  
SCALE IN FEET

SOIL BORING AND MONITORING  
INSTALLED BY DAMES & MOORE  
(1982)

◆ MW-1

OBSERVATION WELL INSTALLED  
BY DAMES & MOORE

◆ OW-1A

MULTI-LEVEL SAMPLING LOCATION  
INSTALLED BY DAMES & MOORE

◆ 10

REILLY TAR & CHEMICAL

**FIGURE 2**  
**SITE PLOT PLAN**

DAMES & MOORE

## Reilly Tar Hazardous Wastes

### Waste Codes

#### Revised Part A Permit Application

U051: Creosote Waste.

K035: Wastewater treatment sludges generated in the production of creosote.

#### Original Part A Permit Application

U051 Creosote  
K035 Sludges from treatment of creosote  
U226 - 1,1, 1 Trichloroethane  
U239 - Xylene  
P008 - 4aAminopyridine  
U002 - Acetone

U112 Ethyl Acetate, Acetic Acid  
U188 Ethylmethacrylate  
U220 Toluene  
U151 Mercury

P.D.C. LABORATORIES, INC.  
INDUSTRIAL WASTE ANALYTICAL SERVICES

1113 N. SWORDS AVENUE  
PEORIA, ILLINOIS 61604

(309) 676-4893

ANALYTICAL REPORT FORM:

To: Reilly Tar & Chemical Date Collected 5/14/85 Date of Report 6/14/85  
P.O. Box 370 Sampled By — Sample# 5P-349  
Granite City, IL 62040 Date Received 5/17/85 PDC# —  
— Date Completed 6/14/85 Permit# —  
Attn: Larry Pirtle P.O.# 13-242

Waste Stream Construction debris  
Physical Appearance: Odor — Color — Paint Filter passed  
Physical State solid Number of Phases 1 Water Reactivity none  
Water Solubility not water soluble Load Bearing Capacity — tons/sq.ft.  
pH — (neat); 8.3 (10% solution) Phase solid Solids 93 %  
Flashpoint >200°F Acidity — % Alkalinity — %

Analysis Parameters

Parameters	Total (mg/kg)	EP Toxicity (mg/l)	EPA Code	EP Limit (mg/l)
Arsenic		<0.004	D004	5.0
Barium		<0.08	D005	100.0
Cadmium		<0.01	D006	1.0
Chromium tot		<0.02	D007	5.0
Lead		<0.05	D008	5.0
Mercury		<0.0001	D009	0.2
Selenium		<0.001	D010	1.0
Silver		<0.01	D011	5.0
Cyanide	7.5			
Phenol	9			
Sulfide	44			
PCB				
BTU/lb.				
% Ash(800°C)				
% Sulfur				
% Halogen as Chloride				

< = less than > = greater than

Note 1: All analysis are conducted utilizing recommended USEPA and IEPA Methods.

Note 2: The paint filter and load bearing capacity tests are run according to Illinois Pollution Control Board (6/84) Section 729.320/321

Deborah A. Zisch  
Laboratory Manager

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